

Application No.: 10/715,066

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

ROBERT L. JONES and
ROLAND SCHMIDT

Serial No.: 10/772,126

Filed: February 4, 2004

For: AERATOR APPARATUS AND
METHOD OF USE

Attorney Docket No.: 026196.50382

TRANSMITTAL LETTER

Mail Stop: DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The following documents for the above-captioned application are enclosed herewith:

1. Information Disclosure Statement;
2. Information Disclosure Citation (form PTO-1449); and
3. Return Postcard.

If a fee is due, please debit Deposit Account No. 50-0858. In this regard, a duplicate copy of this Transmittal Letter is enclosed herewith.

Respectfully Submitted,

Butler, Snow, O'Mara, Stevens &
Cannada, PLLC

March 16, 2004
Date

By: Susan B Fentress
SUSAN B. FENTRESS
Reg. No. 31,327
6075 Poplar Avenue, Suite 500
Memphis, TN 38119
(901) 680-7319



Application No.: 10/715,066

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:)
)
ROBERT L. JONES and)
ROLAND SCHMIDT)
)
Serial No.: 10/772,126)
)
Filed: February 4, 2004)
)
For: AERATOR APPARATUS AND) Attorney Docket No.: 026196.50382
METHOD OF USE)

INFORMATION DISCLOSURE STATEMENT

Mail Stop: DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached Form PTS-A820. A copy of each of the references listed on the attached form is submitted herewith.

Applicant respectfully requests that the Examiner consider the listed documents and indicate that it was considered by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that the listed documents are material or constitute "prior art". If the Examiner applies the document as prior art against any claim in the application and Applicant determines that the cited documents do not constitute "prior art" under United States law. Applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should the documents be applied against the claims of the present application.

Document AA – U.S. Patent No.: 3,794,303 discloses a method and apparatus for aerating bodies of open water utilize unbalanced water columns interconnected at their upper ends to provide continuous aeration of the water at any desired depth. The head on one column which serves both to raise and to aerate the water therein. Alternatively, the water may be circulated by mechanical means and the air introduced at the top of its travel. Undissolved air is permitted to escape as it passes between the columns before it enters the return column.

Document BB – U.S. Patent No.: 4,455,232 discloses a barriered circulator/aerator in the endless channel of a barrier oxidation ditch provides a directly pumped flow of mixed liquor into a central liquor inlet zone and an energy-release induced flow of mixed liquor into a surrounding liquor inlet zone at the inlet of a deep oxygen contact duct which passes beneath the barrier to the discharge channel on the downstream side thereof. It further provides mixing of diffused air with the directly pumped flow and/or the induced flow and then moving the combined air-liquor flows into the deepest portion of the contact duct where point-source pressurized aeration of both flows occurs. Eddy jet diffusers are preferably used for aerating the induced flow. Oxygen transfer efficiencies are obtained that are 1.6-2.2 times as great per brake horsepower per hour as that attainable by 100% pumping of the mixed liquor in a total barrier oxidation ditch, as disclosed in U.S. Pat. No. 4,260,278.

Document CC – U.S. Patent No.: 4,909,936 discloses a water aerating unit which is particularly adapted for aerating bodies of water adjacent the shoreline and is readily transportable from one location to another. A suitable transporting vehicle is provided such as a tractor having a power take-off and hydraulic system for providing the driving power water for the propeller as well as the air blower mounted on the unit. The unit is supported on a wheeled frame by which the elevation of the lower submerged end thereof may be adjustably varied by a hydraulic system.

Document DD – U.S. Patent No.: 5,609,754 discloses a secondary sewage treatment system is provided with a treatment vessel disposed within a septic tank. The treatment vessel has a draft tube for aerating and circulating waste liquor through the treatment vessel and through media contained within the treatment vessel. The media has one part that is submerged media and another part that is an unsubmerged trickle media. The operation of the draft tube

circulated waste liquor within the treatment vessel through the submerged media and up through the draft tube where it is expelled and trickles down through the trickle media back into the liquor in the lower portion of the treatment vessel.

Document EE – U.S. Patent No.: 5,624,574 discloses a process for use in the final stages of purification of sewage water in which the effluent is placed under pressure by a pump and forced through a filter. Part of the effluent is sampled and chlorinated by a chlorine gas injector and then reintroduced into the lager body of effluent. The entire mixture is held within a detention chamber in order to allow the chlorine to dissipate, and then pumped out into a natural stream through a pipe in which air bubbles are injected in order to replenish the oxygen level.

Document FF – U.S. Patent No.: 5,676,889 discloses an apparatus for aerating and mixing liquids and gases that includes a hollow housing, at least one rotating object, rotating apparatus for rotating the rotating object, a shaft, and at least one adjustably positioned conduit tube. The hollow housing has a hollow housing first portion and a hollow housing second portion. The hollow housing first portion has a hollow housing first portion wall that contains at least one hollow housing first portion wall inflow port and the hollow housing second portion has a hollow housing second portion wall that contains at least one hollow housing second portion wall outflow port. The at least one rotating object is located in the hollow housing second portion and has a rotating object low pressure side. The rotating apparatus rotates the at least one rotating object and is located in the hollow housing first portion. The shaft connects the at least one rotating object to the rotating apparatus. And, the at least one adjustably positioned conduit tube passes through the at least one hollow housing first portion wall inflow port and has a conduit tube first end located external to the hollow housing and a conduit tube second end located in the rotating object low pressure side so that upon rotation of the at least one rotating object a substance can be drawn from the conduit tube first end to the rotating object low pressure side.

Document GG – U.S. Patent No.: 5,744,072 discloses an apparatus and a process for use in aeration of a fluid. The apparatus includes a tubular drive shaft having a first end and a second end. The first end is coupled to a selectively rotatable power source. A compressed air source is in fluid communication with the tubular drive shaft. A first propeller having a propeller

shaft is coupled to the second end of the tubular drive shaft. An atomizing mechanism is located proximate the propeller shaft. The apparatus may further include a second propeller having a propeller shaft positioned between the first propeller and the second end of the tubular drive shaft. In another mode of operation, the aerator may be used solely as a mixer in an nitrification/de-nitrification process without the introduction of outside air or compressed air.

Document HH – U.S. Patent No.: 6,223,689 discloses an aquaculture system for allowing live seafood such as clam seeds to grow on a floatation raft which can be positioned in water dock spaces of a marina. A first embodiment allows for an air source such as a regenerative blower to pump air into airlifts under the floatation raft causing seawater to become aerated to flow into and up through screens in container units in the raft allowing for the live seafood on the screens to become both aerated and fed. A second embodiment is a downwell unit where the aerated water flows down the container units through the screens. The upwell air lifts can be modified with spray arm attachments to convert the system from upwell to downwell flow operations. The airlifts can have forty-five degree angled cut bottoms, and include extension tubes for allowing deeper seawater to be introduced into the system. Removable filters can be attached to the airlifts to filter out undesirable contaminants from the system.

Document II – U.S. Patent No.: 6,345,810 discloses an aerating unit includes a container, a submersible motor disposed in the container and having a shaft which is provided with a propeller, an air conduit connected to an air supply at one end and extending into said container at the other end which defines an air outlet adjacent to and facing toward the propeller for introducing air toward the propeller, and a base disposed below and aligned vertically with the propeller in the container and having a curved surface which is convex in a direction toward the propeller for deflecting the air directed from the propeller in radial directions away from the curved surface.

In the event the Examiner has any questions regarding this document, please contact the undersigned at the telephone number listed below.

Respectfully Submitted,

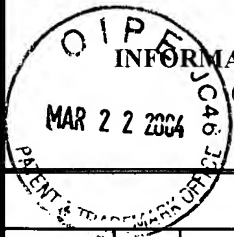
Butler, Snow, O'Mara, Stevens &
Cannada, PLLC

March 16, 2004 By: Susan B Fentress
Date
SUSAN B. FENTRESS
Reg. No. 31,327
6075 Poplar Avenue, Suite 500
Memphis, TN 38119
(901) 680-7319

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, on 3-16-04 in an envelope addressed to: Mail Stop: DD, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Lori L. Wood
LORI L. WOOD

**INFORMATION DISCLOSURE CITATION***(Use several sheets if necessary)*

Docket Number (Optional)

026196.50382

Application Number

10/772,126

Applicant(s)

Robert L. Jones and Roland Schmidt

Filing Date

02/04/04

Group Art Unit

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	3,794,303	02/26/74	Benedict Hirshon	261/61	261/64	06/11/73
	BB	4,455,232	06/19/84	John Reid	210/628	210/194	03/24/82
	CC	4,909,936	03/20/90	Dominic Arbisi	210/220	210/241	04/17/89
	DD	5,609,754	03/11/97	William Stuth	210/151	210/195.1	03/11/97
	EE	5,624,574	04/29/97	Dean Caldwell	210/754	210/758	11/20/95
	FF	5,676,889	10/14/97	Michael Belgin	261/93	43/57	05/09/95
	GG	5,744,072	04/28/98	Rudolf Karliner	261/87	261/120	04/28/98
	HH	6,223,689	05/01/01	Gregory Nelson	119/234	119/236	02/10/99
	II	6,345,810	02/12/02	Shen-Jan Hung	261/91	261/93	02/18/00

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER**DATE CONSIDERED**

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.